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EXAMINER	
PADMANABHAN, KAVITA	
ART UNIT	PAPER NUMBER
2161	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/15/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/766,561	KOIKE ET AL.	
	Examiner	Art Unit	
	Kavita Padmanabhan	2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 November 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/28/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

1. Claims 1-17 are pending.

2. Claims 1, 4, 5, 7-9, 11, and 13-17 have been amended.

3. Claims 1-17 are rejected.

Specification

4. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code at page 7, line 3 and page 13, line 9, for example. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01, which states in part,

> "37 CFR 1.57(d) states that an incorporation by reference by hyperlink or other form of browser executable code is not permitted. Examples of a hyperlink or a browser-executable code are a URL placed between these symbols "< >" and http:// followed by a URL address. When a patent application with embedded hyperlinks and/or other forms of browser-executable code issues as a patent (or is published as a patent application publication) and the patent document is placed on the USPTO web page, when the patent document is retrieved and viewed via a web browser, the URL is interpreted as a valid HTML code and it becomes a live web link. When a user clicks on the link with a mouse, the user will be transferred to another web page identified by the URL, if it exists, which could be a commercial web site. USPTO policy does not permit the USPTO to link to any

commercial sites since the USPTO exercises no control over the organization, views or accuracy of the information contained on these outside sites,"

"If hyperlinks and/or other forms of browser-executable code are embedded in the text of the patent application, examiners should object to the specification and indicate to applicants that the embedded hyperlinks and/or other forms of browser-executable code are impermissible and require deletion," and

"The attempt to incorporate subject matter into the patent application by reference to a hyperlink and/or other forms of browser-executable code is considered to be an improper incorporation by reference. See 37 CFR 1.57(d) and MPEP § 608.01(p), paragraph I regarding incorporation by reference. "

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: While the term "degree of association" appears in the specification, the term "degree of relationship" does not. The use of the terms "linked" and "linking" in the claims is also not consistent with the terms "connecting" and "connected" in the specification. The applicant is suggested to amend the claims to use terminology consistent with the specification.

Claim Objections

6. **Claims 1 and 14** is objected to because of the following informalities:

With respect to claim 1, there appears to be a word missing before the word "plurality" at line 13 of the claim.

With respect to claim 14, there appears to be a word missing before the word "gene" at line 3 of the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. **Claims 13-15** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. With respect to **claim 13**, "a lod score of a result of linkage analysis to said calculation result" is not described sufficiently in the applicant's specification. With respect to **claims 14 and 15**, "gene clustering based on gene attributes" is not described sufficiently in the applicant's specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The applicant's specification does not sufficiently enable one of ordinary skill in the art to perform gene clustering based on gene attributes or to calculate a lod score to be used in the applicant's invention. While the applicant states at page 23, lines 13-14, of the specification that, "The lod score is described in detail by Onda et al., Stroke, 34(7), pp. 1640-1644, 2003," this document has not been incorporated by reference into the applicant's original specification, and therefore is not considered part of the applicant's disclosure.

9. **Claims 1-17** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With respect to **claims 1 and 16**, the limitation "the table including a degree of a *relationship between each two of the terms* belonging to the third category" does not appear to be described in the applicant's original specification, *nor has the applicant indicated which portions of the original specification might contain such support.* The limitation "a *chain* of plurality of terms" also does not appear to be supported.

With respect to **claim 11**, the limitation "other *external* information about said terms" does not appear to be described in the applicant's original specification, *nor has the applicant indicated which portions of the original specification might contain such support.*

With respect to **claim 13**, the limitation "a lod score of a result of linkage analysis *to said calculation result*" does not appear to be described in the applicant's original specification, *nor has the applicant indicated which portions of the original specification might contain such support.*

With respect to **claim 14**, the limitations "gene attributes" and "query is gene with attributes" do not appear to be described in the applicant's original specification, *nor has the applicant indicated which portions of the original specification might contain such support.*

With respect to **claim 15**, the limitations "query is genes with attributes" and "similarity of said genes based on the network of terms is inconsistent with a result of said clustering" do

not appear to be described in the applicant's original specification, *nor has the applicant indicated which portions of the original specification might contain such support.*

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. **Claims 1-17** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the third category comprising the first category and the second category." It is still unclear to the examiner in what way the third category comprises the first and second categories. For example, do terms belong to the first and second categories, and the third category contains the terms belonging to the first and second categories, etc? It is even more unclear how the third category comprises the first and second category since, based on the first two claim limitations, it appears that queries, not terms, belong to the first and second categories, whereas terms belong to the third category. For the purposes of examination, the examiner is assuming that the applicant is intending to claim that a first query has terms belonging to a first category, the second query has terms belonging to a second category, and the third category comprises terms belonging to the first and second categories. **Claim 16** contains a similar limitation. Applicant is requested to clarify the language of the claims.

Claim 5 recites the limitation "the terms" in line 3 of the claim. There is insufficient antecedent basis for this limitation in the claim. It is unclear whether this limitation is referring to query terms, terms belonging to the third category, or the terms connecting the first and second query.

Claim 12 recites the limitation "said term" twice in line 3 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 13 recites the limitation "said calculation result" in line 4 of the claim. There is insufficient antecedent basis for this limitation in the claim. It is also unclear to the examiner what is meant by the limitation "*a lod score ... to said calculation result*".

Claim 15 recites the limitation "the first query and the second query which are inconsistent with a result of the gene clustering." It is unclear to the examiner what is intended by this limitation, especially given that only the first or second query is claimed to be genes whose similarity is considered. Therefore, it is unclear how a first and second query can be inconsistent with the result of the gene clustering if only one of the queries has genes that are clustered.

The examiner will apply prior art to this claim as best understood in light of the above rejection.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. **Claims 1-5, 7-9, 11, and 16-17** are rejected under 35 U.S.C. 102(b) as being anticipated by **Miller et al.** (US 2002/0091678, hereinafter "Miller").

In regards to **claim 1**, **Miller** teaches a network drawing system, comprising:

- a first input unit designating a first query belonging to a first category **(Miller; Figure 7, reference character S1; par [0052] – *"the user enters a set of query objects"*)**;
- a second input unit designating a second query belonging to a second category **(Miller; Figure 7, reference character S1; par [0052] – *"the user enters a set of query objects"* – plural means at least a first and a second query are entered and the different queries constitute different categories in that each query clearly belongs to its own category at the least)**;
- a data storage device storing terms belonging to a third category in a form of a table, the third category comprising the first category and the second category, the table including a degree of a relationship between each two of the terms belonging to the third category **(Miller; par [0045], lines 8-12; par [0054], lines 10-12 – "The display may include information such as author, frequency tables for occurrence of selected terms in the query, probable status for the object corresponding to the point 54 vis-a-vis the query 33 occurring within the object, confidence factor and the like." – teaches tables including terms, probable statuses, confidence factors, etc. and the confidence factors are indicators of a degree of an association)**;
- a calculation device which calculates a relationship between the input first query and second query through a plurality of terms using the table stored in said data storage device **(Miller; par [0054], lines 10-14; par [0055] – *"feature vectors have already been calculated"*, *"determines relationships between each of the data objects in the database and the query objects"* – relationships are determined via calculations)**; and

- a display device displaying on a screen a network of terms linking the first query and the second query through a chain of plurality of terms based on a result of calculation made by said calculation device **(Miller; par [0056], Figs. 3 and 4 – "*the processor 20 projects the relationships calculated*" – the relationships are displayed through a plurality of the terms used in the queries)**.

In regards to **claim 2**, **Miller** teaches the network drawing system according to claim 1, further comprising

- a third input unit for designating a drawing condition **(Miller; par [0043]; Fig. 7, steps S12, S13, S15)**; and
- said network being displayed according to said drawing condition **(Miller; par [0043]; Fig. 4)**.

In regards to **claim 3**, **Miller** teaches the network drawing system according to claim 1, wherein said data storage device further stores attributes of said terms **(Miller; pars [0031]-[0032], pars [0061] - [0062])**.

In regards to **claim 4**, **Miller** teaches the network drawing system according to claim 1, wherein at least one of said first query and said second query includes a plurality of query terms **(Miller; par [0032], lines 1-5)**.

In regards to **claim 5**, **Miller** teaches the network drawing system according to claim 1, wherein among routes linking said first query and said second query, a route having the highest degree of a relationship between the terms is displayed by a highlight line **(Miller; Figs. 3, 4, and 6)**.

In regards to **claim 7**, **Miller** teaches the network drawing system according to claim 1, wherein the relationship between said terms is extracted according to co-occurrence between terms or phrase patterns **(Miller; par [0031], lines 1-6; par [0032], lines 5-8; par [0045], lines 6-12)**.

In regards to **claim 8**, **Miller** teaches the network drawing system according to claim 2, wherein the network of the terms is re-displayed interactively by changing the setting of said third input unit **(Miller; par [0043]; par [0047]; par [0059]; Fig. 7, steps S12, S13, S15)**.

In regards to **claim 9**, **Miller** teaches the network drawing system according to claim 2, wherein the linkage between the terms or editing for addition or deletion of a term itself can be conducted interactively by changing the setting of said third input unit **(Miller; par [0043]; par [0047]; Fig. 7, steps S12, S13, S15)**.

In regards to **claim 11**, **Miller** teaches the network drawing system according to claim 1, wherein the relationship between said terms is displayed on the screen at the same time with other external information about said terms **(Miller; Figs. 3, 4, and 6)**.

Claim 16 is rejected using the same citations provided for claim 1.

In regards to **claim 17**, **Miller** teaches the network drawing method according to claim 16, wherein said data storage device is accessed through an Internet **(Miller; par [0026]; Fig. 2)**.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

16. **Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Miller in view of Murray et al.** (US 6,876,930, hereinafter "Murray").

In regards to **claim 10**, **Miller** teaches the network drawing system according to claim 1. Miller does not expressly teach a synonym dictionary for converting at least one query input through said first input unit or said second input unit into a standardized term. **Murray** teaches querying a database to identify synonyms for genes that are being queried and then proceeding with the search based on the input gene and its identified synonyms **(Fig. 10, steps 300-320)**. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to implement the system of Miller by using a synonym dictionary to convert an input term into its synonyms, such as that taught by Murray, in order to be able to more accurately depict relationships between terms by using both the input term and its identified synonyms **(Murray; col. 28, lines 1-6)**.

17. **Claims 6 and 12-15** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Miller in view of Chamberlin et al.** (US 6,941,317, hereinafter "Chamberlin").

In regards to **claim 6**, **Miller** teaches the network drawing system according to claim 1. Miller does not expressly teach said first category being at least one of a disease name, a symptom, a protein name, a gene name, a compound name, a gene function and a protein's function; and said second category being at least one of the compound name, the protein name and the gene name. **Chamberlin** teaches entering queries wherein the keywords are amino acid sequences, gene names, etc. **(Chamberlin; col. 15, line 52 – col. 16, line 28)**, in order to perform searches, browse sequences, and examine and display relationships between genes **(Chamberlin; col. 14, lines 9-19)**. It would have been obvious to one of ordinary skill in the art

at the time of the applicant's invention to implement the system of Miller using the biological queries of Chamberlin in order to be able to query databases containing biological data and display relationships between such data **(Chamberlin; col. 1, lines 25-32; col. 14, lines 9-19)**.

In regards to **claim 12**, **Miller** teaches the network drawing system according to claim 1. Miller does not expressly teach when said term has a hierarchy, said term being displayed hierarchically. **Chamberlin** teaches displaying items in a hierarchical tree **(Chamberlin; Fig. 15)**. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to implement the system of Miller using the hierarchical display feature of Chamberlin, whereby if terms have a hierarchical relationship, the system of Miller would indicate the hierarchy in the graphical representation of the network in order to display relationships between biological data **(Chamberlin; col. 1, lines 25-32; col. 14, lines 9-19)**.

In regards to **claim 13**, **Miller** teaches the network drawing system according to claim 1. **Miller** also teaches displaying information associated with a term on the display **(Miller; par [0045], line 1 – par [0046], line 5; par [0061] – par [0062])**. Miller does not expressly teach said second category being a gene name, and said gene name being displayed along a horizontal axis of said screen, and a lod score of a result of linkage analysis to said calculation result being displayed for each gene of the horizontal axis or together with information on a chromosome position. **Chamberlin** teaches entering queries wherein the keywords are amino acid sequences, gene names, etc. **(Chamberlin; col. 15, line 52 – col. 16, line 28)**, a display depicting relationships between sequences **(Chamberlin; Fig. 15)**, and displaying a "log odds score"

(Chamberlin; Fig. 11; col. 16, lines 4-10). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to implement the system of Miller with the biological data of Chamberlin, whereby the second query term is of the gene name category, and the gene name and log odds score information is displayed with the graphical representation of the network in order to display information about and relationships between biological data **(Chamberlin; col. 1, lines 25-32; col. 14, lines 9-19)**.

In regards to **claim 14**, **Miller** teaches the network drawing system according to claim 1. Miller does not expressly teach the relationship between said terms being displayed together with a result of gene clustering based on gene attributes, wherein the first query or second query is gene with attributes. **Chamberlin** teaches displaying the relationships between genes and protein sequences and also teaches displaying families of sequences **(Chamberlin; Fig. 11; Fig. 15)**, which constitutes clustering or grouping. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to implement the system of Miller using the display feature of Chamberlin, whereby relationships between terms would take into account familial and evolutionary relatedness, in order to display relationships between biological data **(Chamberlin; col. 1, lines 25-32; col. 14, lines 9-19)**.

In regards to **claim 15**, **Miller** teaches the network drawing system according to claim 1. **Miller** also teaches highlighting a route connecting different items, i.e. terms that do not match with each other **(Miller; Fig. 4, Fig. 6)**. Miller does not expressly teach when a result of displaying the network is not consistent with a result of the gene clustering, a route connecting

the first query and the second query which are inconsistent is displayed by a highlight line. **Chamberlin** teaches displaying the relationships between genes and protein sequences and also teaches displaying families of sequences **(Chamberlin; Fig. 11; Fig. 15)**, which constitutes clustering or grouping. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to implement the system of Miller using the biological data of Chamberlin, whereby when there is not an exact match found, a nearest match could be highlighted on the display to indicate relationships between biological data **(Miller, par [0049]; Chamberlin, col. 1, lines 25-32, col. 14, lines 9-19)**.

Response to Amendment

18. Applicant's amendments filed 11/28/06 with respect to the objections to the specification have been fully considered. While the objections to the abstract have been withdrawn, the objections to the specification with respect to hyperlinks have been maintained, as explained above. While the applicant at page 8 of applicant's remarks indicates that the "disclosure is being amended so as to delete the embedded hyperlink and/or other form of browser-executable code," this does not appear to be the case. New objections were also necessitated by applicant's amendment to the claims, as indicated above.

19. Applicant's amendment filed 11/28/06 with respect to the objections to the claims have been fully considered. The previous objections have been withdrawn accordingly. However, new objections were necessitated by applicant's amendment, as indicated above.

20. Applicant's amendments filed 11/28/06 with respect to the 35 U.S.C. 112, 2nd paragraph rejections have been fully considered. Certain rejections have been maintained, as indicated above.

Response to Arguments

21. Applicant's arguments filed 11/28/06 with respect to the 35 U.S.C. 112, 1st paragraph rejections have been fully considered. While the previous rejections of claims 14-15 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement have been withdrawn, the rejections of claims 13-15 under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement have been maintained, as indicated above. The applicant's specification does not sufficiently enable one of ordinary skill in the art to perform gene clustering based on gene attributes or to calculate a lod score to be used in the applicant's invention. While the applicant states at page 23, lines 13-14, of the specification that, "The lod score is described in detail by Onda et al., Stroke, 34(7), pp. 1640-1644, 2003," this document has not been incorporated by reference into the applicant's original specification, and therefore is not considered part of the applicant's disclosure. Furthermore, the applicant at page 9 of applicant's remarks has argued that the references newly submitted by the applicant prove that the terms "lod score" and "gene clustering" are well known to those skilled in the art. The examiner respectfully asserts that this does not overcome the 35 U.S.C. 112, first paragraph enablement requirement, as these references are not part of the applicant's specification and have not been incorporated by reference into the applicant's specification. Furthermore, applicant still

has not indicated portions of the applicant's original specification that would enable one to make and/or use the invention.

22. Applicant's arguments filed 11/28/06 with respect to the rejections of the claims have been fully considered but they are not persuasive.

Applicant argues at page 10 of applicant's remarks that Miller does not show inputting a first query belonging to a first category and a second query belonging to a second category, respectively. The examiner respectfully disagrees. The examiner asserts that the applicant does not explicitly define the term "category" in the original specification and the term is therefore given its broadest reasonable interpretation. The examiner asserts that Miller teaches inputting a plurality of queries (Miller; Figure 7, reference character S1; par [0052]) and that a plurality of queries indicates at a first and a second query, and different queries constitute different categories in that each query constitutes its own category at the least. For example, the categories could be "query 1" and "query 2".

Applicant also argues at page 10 of applicant's remarks that Miller does not show calculating a relationship between the input first query and second query through a plurality of terms. The examiner respectfully disagrees. The examiner asserts that Miller clearly teaches calculating a relationship between the input first query and second query through a plurality of terms (Miller; par [0054], lines 10-14; par [0055]) in that Miller teaches that relationships are calculated and that these calculations are based in part on terms of the queries. Furthermore, the examiner notes that the applicant has not provided any explanation as to why Miller allegedly does not teach the limitation in question.

Conclusion

23. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kavita Padmanabhan** whose telephone number is **571-272-8352**. The examiner can normally be reached on Monday-Friday, 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Apu Mofiz can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kavita Padmanabhan
Assistant Examiner
AU 2161
KP.
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February 6, 2007

Apu Mofiz
SPE, TC 2100